

## INTERNATIONAL SEARCH REPORT

National Application No

P/EP2004/005377

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 B01J2/16 B01J8/28

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 635 684 A (MANDEVILLE JOSCELYNE FRANCIS) 21 April 1953 (1953-04-21)	1-3
Y	column 2, line 38 - column 3, line 17; figure	4-7
Y	US 5 213 820 A (UHLEMANN HANS ET AL) 25 May 1993 (1993-05-25) column 4, line 24 - line 35; figure 1	4-7
A	EP 1 312 410 A (FREUND IND CO LTD) 21 May 2003 (2003-05-21) column 9, line 27 - column 12, line 10; figure 1	1-7 -/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the International filing date but later than the priority date claimed

\*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

\*&\* document member of the same patent family

Date of the actual completion of the International search

Date of mailing of the International search report

2 September 2004

09/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Cubas Alcaraz, J

**INTERNATIONAL SEARCH REPORT**

International Application No

PCT/EP2004/005377

**C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 036 338 A (HERMAN NACK) 29 May 1962 (1962-05-29) column 5, line 65 - column 8, line 26; figure 1	1-7
A	US 4 946 653 A (STOPP GERHARD ET AL) 7 August 1990 (1990-08-07) column 1, line 60 - column 3, line 13; figure 1	1-7

## INTERNATIONAL SEARCH REPORT

Information on patent family members

National Application No

PCT/EP2004/005377

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 2635684	A 21-04-1953	NONE		
US 5213820	A 25-05-1993	DE 3808277 A1 DE 58900108 D1 EP 0332929 A1 JP 1274832 A JP 2811578 B2		21-09-1989 13-06-1991 20-09-1989 02-11-1989 15-10-1998
EP 1312410	A 21-05-2003	JP 2002018266 A EP 1312410 A1 WO 0183098 A1 US 2003190417 A1		22-01-2002 21-05-2003 08-11-2001 09-10-2003
US 3036338	A 29-05-1962	NONE		
US 4946653	A 07-08-1990	DE 3206236 A1 DE 3360248 D1 EP 0087039 A1 ES 8400891 A1 JP 1604366 C JP 2026536 B JP 58170534 A MX 162274 A		01-09-1983 18-07-1985 31-08-1983 16-02-1984 22-04-1991 11-06-1990 07-10-1983 19-04-1991